

**REMARKS**

Favorable review is requested in view of the above amendments and following remarks. Editorial amendments have been made to claims 1, 10, 13, and 14. Claim 5 has been cancelled. No new matter has been added. Claims 1 - 16 are pending in the application.

**Restriction**

The Examiner has withdrawn claims 13 - 16 from consideration as being directed to a non-elected invention. Applicants have amended claims 13 and 14 to track the product claims, and claim 15 is dependent on claim 14. Applicants maintain claim 16 for reinstatement once generic claim 1 is allowed.

**Rejection under 35 U.S.C. § 103**

Claims 1 - 6 and 10 - 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 4-45811 (JP '811) in view of Pike et al. (U.S. Patent No. 6,090,731). Applicants respectfully traverse this rejection, and respectively request reconsideration in view of the following comments.

Claim 1 requires that at least a part of fiber intersections is thermally adhered by a thermal compression bonding method. In contrast, the filter medium of Pike et al. is through-air bonded. See column 3, lines 61 - 63 of Pike et al. More specifically, Pike et al. provide that the filter medium of Pike et al. is not calender bonded. See id. Calender bonding is a specific type of thermal compression bonding. Therefore, Pike et al. directly teaches away from using thermal compression bonding, and thus, the present claimed invention. Withdrawal of the rejection is requested.

In addition, applicants have shown through experimentation that the present claimed invention produces unexpected results, which rebut prima facie obviousness. See the previously filed YAMAGUCHI Declaration and MPEP § 716.02(a). A comparative experiment was performed between the filter cartridges used for examples 4 and 11 of the present invention and that of Pike et al. The results and experimentation are explained in detail in the previously filed YAMAGUCHI Declaration. In summary, the filter life of the present invention was much longer

than that of Pike et al., which is an unexpected result. See page 3 of the YAMAGUCHI Declaration. In particular, the filter life of Example 11 of the present invention is over 200 times longer than that of Example 5 in Pike et al.

Moreover, the present invention has superior properties to JP '811. The filter cartridge described for Comparative Example 3 of the present application (see page 46 of the specification) is analogous to that of JP '811. The initial trapped particle diameters of Comparative Example 3 and Example 20 are 10.1 and 10.0  $\mu\text{m}$ , respectively, which are almost identical. See Table 2 of the specification. However, the initial pressure loss, trapped particle diameter in 0.2 MPa, and filter life of Comparative Example 3 are 0.010 MPa, 13  $\mu\text{m}$ , and 80 minutes, respectively. Whereas, the initial pressure loss, trapped particle diameter in 0.2 MPa, and filter life of Example 20 are 0.003 MPa, 10  $\mu\text{m}$ , and 225 minutes, respectively. These characteristics represent unexpected results.

However, the Examiner maintains Pike et al. suggests that such an arrangement has high filtration efficiency and physical strength and that the combination covers the instant invention. See pages 2 - 3 and 5 of the Office Action. While Pike et al. may assert that their nonwoven filter medium is suitable for various filter applications, which generally might require high filter efficiency and physical strength, it provides no reason to expect that the combination of JP '811 and Pike et al. would provide the unexpected results of the present claimed invention. See column 3, lines 17 - 20 of Pike et al. It is legally incorrect to assume that the unexpected results of the present claimed invention would be inherent with the combination of JP '811 and Pike et al. See Ex parte Ohsaka, 2 USPQ2d 1460 (BPAI 1987). Therefore, the claimed invention is patentable over JP '811 in view of Pike et al. Withdrawal of the rejection is requested.

Furthermore, even if Pike et al. and JP '811 were combined, they would not be expected to achieve the properties of claimed invention. At most, the properties would be somewhere in between the two inventions (Pike et al. and JP '811), not exceeding them, as the present claimed invention does. Consequently, the unexpected results, as indicated above, rebut any prima facie obviousness. Withdrawal of the rejection is requested.

Claims 7 - 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 4 - 45811 in view of Pike et al. and further in view of JP 1 - 115423. Applicants respectfully

traverse this rejection, and respectfully request reconsideration in view of the following comments.

JP 4 - 45811 and Pike et al. are distinguished above as failing to describe or suggest a filter cartridge comprising a strip, spun bonded non-woven fabric. JP 1 - 115423 is relied upon to suggest pleating. Even if it does, which is not being conceded, this reference fails to remedy the noted shortcomings of the other references. Thus, withdrawal of the rejection is requested.

#### Conclusion

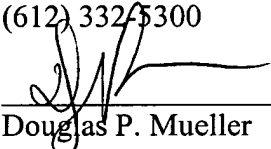
In view of the above amendments and remarks, favorable reconsideration in the form of a Notice of Allowance is respectfully requested. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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